

### **REMARKS/ARGUMENTS**

This paper is being submitted in response to the Office Action dated December 30, 2010. At that time claims 1-8 were pending in the application.

In the Office Action certain issues were raised under 35 U.S.C. §112, second paragraph. In addition, claims 1, 4-6 were rejected under 35 U.S.C. §103(a) over Caroselli (United States Patent No. 3,625,809) in view of Marzocchi (United States Patent No. 3,631,667). Claims 2 and 3-7 were rejected over Caroselli in view of Marzocchi and further in view of Maag (United States Patent No. 4,028,874).

By this paper, claims 1-3 have been amended and new claim 9 has been added. Claims 1-9 are presented for reconsideration and allowance by the Examiner.

#### **Rejections Under 35 U.S.C. §112**

Claims 2 and 3 have been amended in response to the examiner's objections under U.S.C. § 112 by deleting '*from*.' Similarly, claims 7 and 8 have been amended and are now dependent upon claim 1 with all terms having antecedent basis in claim 1.

#### **Rejections Under 35 U.S.C. §103**

M.P.E.P. § 2141 sets forth the Graham factual enquiries that should be considered when making an obviousness rejection under Section 103: 1) ascertaining the scope and content of the prior art; 2) ascertaining the differences between the claimed invention and the prior art; and 3) resolving the level of ordinary skill in the pertinent art. (Citing *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966).) In addition, M.P.E.P. §§ 2141 and 2142 set forth that "the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit." (Citing *KSR International Co. v. Teleflex Inc.* (KSR), 550 U.S. 398, 82 USPQ2d 1385 (2007).) Accordingly, Applicant respectfully submits that (1) the references in the Office Action, either alone or in combination, do not teach or suggest all the limitations claimed in the amended claim set provided herein. Applicant also respectfully submits that (2) the Office Action has failed to show how one of skill in the art would have found it obvious to overcome the differences between the prior art and the claimed invention to arrive at the claimed invention.

Claim 1 has been amended to refer to the first component having a higher modulus of elasticity than the second component. Claim 1 has been amended further to recite that the first component comprises a metal wire. This is supported at page 3, line 2 referring to the international application as published. Additionally, new claim 9 has been added and is supported at page 3, line 10 and elsewhere.

As detailed in the specification as filed, the first and stiffer component is wrapped around a more elastic core second component being of much greater diameter. When the composite is placed under load, the helical wrap straightens causing the diameter of the helix of the core to increase which in turn provides the material with the auxetic characteristic. None of the prior art documents cited by the examiner disclose a *metal* wrap fiber and therefore none of the documents disclose a metal wrap fiber as part of a composite structure with a more elastic component of larger diameter to provide an *auxetic material*.

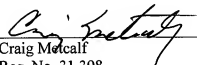
Marzocchi does make reference to '*small diameter stainless steel fibres*' at column 9, lines 29 to 41. However, this does not relate to a helical arrangement of components in which the steel fibers are wrapped around a larger diameter core. This section of Marzocchi states that the organic fibers (19) may be substituted by the steel fibers. This would be entirely contrary to the subject invention as the higher modulus steel would then be formed as the core which is wrapped by the glass fibres (27) referring to figures 4 to 7. Marzocchi therefore may be regarded as teaching away from the subject invention as such an arrangement would not provide an auxetic material.

A material formed from a composite component including metal wire as the wrap, exhibits enhanced ballistic shock dissipation. Additionally, the metal based composite is suitable for manufacturing materials to provide electromagnetic shielding and dampening materials for electronic devices as detailed in the specification as filed at page 7, lines 21 to 28 and page 17, lines 26 to 28.

Conclusion

Applicants submit that the claims as amended are not rendered obvious by Caroselli in view of Marzochi or Maag, and are in condition for immediate allowance. If there are any remaining issues preventing allowance of the pending claims that may be clarified by telephone, the Examiner is requested to call the undersigned.

Respectfully submitted,

  
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